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Fri 23 Feb 2001  
Eff. Date 02/22/00

U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)

TIME 11:10:47  
TITLE PAGE 1

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HANFORD: ER PROGRAM  
REMEDIATION - 300 AREA ACP  
CRIB/FRENCH DRAIN MODEL - Large  
REV. 1 (CFLG01)  
300-43 Unplanned Release @ 304

Designed By: BHI - Estimating Group  
Estimated By: BHI - Estimating Group

Prepared By: BHI - ESTIMATING

Preparation Date: 02/22/00  
Effective Date of Pricing: 02/22/00

Sales Tax: 8.00%

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Release 5.30C

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(Rev 3) Revised to incorporate comments from the 1999 Baseline Validation.  
(Rev 0) This model was developed by copying the Rentention Basein Model and renaming it. No changes were necessary to create it. The Retention Basin Model was developed around January of 1998. It was the first of the RA models to be updated/modified/ corrected and was intended to be the basin model to be used for the development of the remaining remedial action MCACES models.

Currently in this Model:

1. Direct Distributable Rate = 22.38%
2. General & Administrative = 3.93%
3. Subcontractor Overhead and Profit Rates are as follows:
  - a. Field Overhead = 10%
  - b. Home Office Overhead = 3%
  - c. Profit = 7%
  - d. Bond = Calculated within each model
  - e. B&O Tax = 0.47%
4. Contingency Rate = 0% (Input later if desired)
5. The labor database is LABR00. ERC wages are per FY00-FY02 DWP Guidance dated 5/17/99, update 8/4/99 and IOM 069274. The HSSA rates are based on rates dated 9/1/99.
6. The equipment database used is EQ2000 (NAT99A with updated BHI equipment pool rates per FY00-FY02 DWP Guidance dated 5/17/99) entitled "Equip Rt EP1110-1-8, VIII, Jun99+B".
7. Unit pricing database used is UN9500 (NAT95A with incorporation of quotes to BHI and actuals) entitled "1995 National Unit Price Book +B".
8. Cost for Dust suppression water is excluded form this estimate. The use of water is not charged back to the specific site but is covered in the Distribrs.
9. Some of the Labor Resource titles (craft title) changed over time. As sections are updated these titles may be updated but are still the same craft. The following is a crosstalk to those labor resources that have been re-titled;  
Rad Con Tech = HAMTC-Radiological Control Tech = Health Physics Tech = Resource Code 10T25 in the Providional Billing Rates.

Special Note #1

To satisfy procedural requirements items 1,2, 4, 5, 6 & 7 are subject to update before running model and issuing final results.

Special Note #2

Project approval of model applies to model structure/productivity/work approach/methodology/material pricing/unit pricing/resources, etc.

Special Note #3

This model does have the capability to include the Environmental Restoration Disposal Facility (ERDF) transporation and disposal costs that are needed for Focus Fesability Studies (FFS) as well as other studies. To include the ERDF pricing select "yes" to the question on the input screen.

Baseline site cost model estimates will have the ERDF cost turned off. ERDF costs are estimated/included in the ERDF baseline and are to be EXCLUDED in the site remediation baseline.

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. HANFORD: ER PROGRAM  
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	REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
<hr/>					
. HANFORD: ER PROGRAM					
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HANFORD: ER PROGRAM					
					1.0000 LS
	PRODUCTIVITY	18.0000 LS /			
	DURATION	0.0556			
A1	0 Non-Contaminated Soil				
	Non-Contaminated Soil	N		1819.0000	BCF
A1	0 Non-Contaminated Soil				1819.0000 BCF
A10	0 Include ERDF Cost? 1=yes 0=no				
	Include ERDF Cost? 1=yes 0=no	N		0.0000	YES/NO
A10	0 Include ERDF Cost? 1=yes 0=no				0.0000 YES/NO
A3	0 Contaminated Soil				
	Contaminated Soil	N		12000.0000	BCF
A3	0 Contaminated Soil				12000.0000 BCF
A4	0 Demolition Waste				
	Demolition Waste	N		0.0000	
A4	0 Demolition Waste				0.0000 BCF
A5	0 Top Excavation Length				
	Top Excavation Length	N		59.0000	LF
A5	0 Top Excavation Length				59.0000 LF
A6	0 Top Excavation Width				
	Top Excavation Width	N		89.0000	LF
A6	0 Top Excavation Width				89.0000 LF
A7	0 Bottom Area				
	Bottom Area	N		4000.0000	SF

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	REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
. HANFORD: ER PROGRAM					
A7 0 Bottom Area					4000.0000 SF
A8 0 GW Protection Smpls (S3,M21,L60)					
GW Protection Smpls (S3,M21,L60) N		0.0000			
A8 0 GW Protection Smpls (S3,M21,L60)					0.0000 EA
A9 0 Depth of Excavation					
DEPTH OF EXCAVATION	N	3.0000			LF
A9 0 Depth of Excavation					3.0000 LF
ABURDN0 Non Contaminated Soil - Reduced					
Non-Contaminated Soil	W A1	0 (	1819.0000	/ Divide by	BCF
Convert to Cubic Yards	N		27.0000	* Multiply by	CF/CY
Swell Factor	N		1.1500)	* Multiply by	%
N			1.0000		
ABURDN0 Non Contaminated Soil - Reduced					77.4759 LCY
ACSOILO Contaminated Soil					
Contaminated Soil	W A3	0 (	12000.0000	/ Divide by	BCF
Convert to Cubic Yards	N		27.0000	* Multiply by	CF/CY
Swell Factor	N		1.1500)	M (R) Multiply by	
N			1.0000		
ACSOILO Contaminated Soil					511.0000 LCY
ADISBRO Hauling Distance for Borrow					
Hauling Distance for Borrow	N	2.0000			MILE
ADISBRO Hauling Distance for Borrow					2.0000 MILE
ADWAST0 Demolition Waste					
Demolition Waste	W A4	0 (	0.0000	/ Divide by	BCF
Convert to Cubic Yds.	N		27.0000)	M (R) Multiply by	BCF/BCY
Swell	N		1.6000		

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. HANFORD: ER PROGRAM	REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
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ADWAST0 Demolition Waste 0.0000 LCY

AREAST0 Site Area

Top Excavation Length	N	(	0.0000	N	None	
Add 30 lf to each side	W A5	0	59.0000	+	Add to	LF
Top Excavation Width	N		60.0000)	*	Multiply by	LF
Add 30 lf to each side	W A6	0	89.0000	+	Add to	LF
	N		60.0000)	N	None	LF
	N		0.0000)	U	Round Up	
	N		1.0000			

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AREAST0 Site Area 17731.0000 SF

BORROW0 Borrow to Haul

Volume of excavation	N		0.0000	N	None	
Contaminated Soil	W A3	0	12000.0000	+	Add to	BCF
Demolition Waste	W A4	0	0.0000)	B	(R) Divide by	BCF
Convert to Cubic Yards	N		27.0000	M	(R) Multiply by	
10% allowance for compaction	N		1.1000			

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BORROW0 Borrow to Haul 488.0000 LCY

CONDUR0 Contaminated Duration

Contaminated Soil	N	(	0.0000	N	None	
Excav. Rate @ 83 LCY/Hr x 8	W ACSOIL0		511.0000	/	Divide by	LCY
Demolition Waste	N		664.0000	+	Add to	LCY/DAY
Excav. Rate @ 70 LCY/Hr x 8	W ADWAST0		0.0000	/	Divide by	LCY
	N		560.0000)	U	Round Up	LCY/DAY
	N		1.0000			

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CONDUR0 Contaminated Duration 1.0000 DAYS

CONTRK0 Contaminated Loads

Contaminated Soil	N	(	0.0000	N	None	
Demolition Waste	W ACSOIL0	(	511.0000	+	Add to	LCY
	W ADWAST0		0.0000)	/	Divide by	LCY
	N		12.8700)	U	Round Up	LCY/TRK
	N		1.0000			

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CONTRK0 Contaminated Loads 40.0000 LOADS

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CYCLES0 Number of Cycles/Truck/Day

Assume 50 Min. Hours	N	(	50.0000	* Multiply by	MIN/HR
8 Hrs/Day	N		8.0000	/ Divide by	
Total Cycle Time for Borrow	W TIMTOTO		12.6096)	D Round Down	MIN
	N		1.0000		

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CYCLES0 Number of Cycles/Truck/Day 31.0000 CYCLES

DAYPRO0 Total Project Duration

Spread/Compact Soil Qty	N	(	0.0000	N None	
Productivity per Day (219 LCY/hr	W SPREAD0	(	488.0000	/ Divide by	LCY
Site Area	N		1752.0000)	+ Add to	CY/DAY
Dryland Grass Productivity / Day	W AREAST0	(	17731.0000	/ Divide by	SF
1/2 Production, 2 Tractors	N	(	348480.0000	* Multiply by	SF/DAY
	N		0.5000)	N None	
	N		0.0000)	+ Add to	
Total Excavation Duration	W DAYS	0	1.0000	+ Add to	DAY
Allowance for Mobilization	N		12.0000)	U Round Up	DAY
	N		1.0000		

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DAYPRO0 Total Project Duration 14.0000 DAY

DAYS 0 Total Excavation Duration

Non Contaminated Soil	W ABURDN0	(	77.4759	/ Divide by	LCY
Productivity per Day	N		1168.0000	+ Add to	LCY/DAY
Demolition Waste Loading	W ADWAST0		0.0000	/ Divide by	LCY
Productivity per Day	N		560.0000	+ Add to	LCY/DAY
Demolition Waste (demolishing)	W ADWAST0		0.0000	/ Divide by	LCY
Productivity per Day	N		40.0000	+ Add to	LCY/DAY
Contaminated Soil	W ACSOIL0		511.0000	/ Divide by	LCY
Productivity per Day	N		664.0000)	U Round Up	LCY/DAY
	N		1.0000		

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DAYS 0 Total Excavation Duration 1.0000 DAYS

DURBOR0 Total Truck Hours

Borrow to Haul	W SPREAD0		488.0000	/ Divide by	LCY
Load/Haul Borrow Production Rate	N		219.0000	* Multiply by	LCY/HR
Number of Trucks Reqd for Borrow	W NUMTRK0		4.0000		TRKS

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DURBOR0 Total Truck Hours 8.9132 HRS

ERDFQTO Tonnage of LLW to ERDF

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Include ERDF Cost? 1=yes 0=no Tonnage of Waste	W A10 0 W WASTON0	0.0000 766.5000	* Multiply by		YES/NO TONS
ERDFQTO Tonnage of LLW to ERDF					0.0000 TONS

LNGSLA0 Long Slope Area

Top Excavation Length	W A5 0	59.0000	* Multiply by	LF
Depth of Excavation	W A9 0	3.0000	/ Divide by	LF
Depth of Excavation	W A9 0	3.0000	/ Divide by	LF
2 Sides	N	2.0000		

LNGSLA0 Long Slope Area 594.5455 SF

NUMTRK0 Number of Trucks Reqd for Borrow

Total Loading Output	N (	219.0000	* Multiply by	LCY/HR
Convert to Days	N	8.0000	/ Divide by	HR/DAYS
Number of Cycles/Day/Truck	W CYCLES0	31.0000	B (R) Divide by	CYCLES
Truck Capacity	N	15.0000)		LCY

NUMTRK0 Number of Trucks Reqd for Borrow 4.0000 TRKS

QTYLLW0 LLW Volume

Contaminated Soil	W ACSOIL0	511.0000	+ Add to	LCY
Demolition Waste	W ADWAST0	0.0000		LCY
QTYLLW0 LLW Volume				511.0000 LCY

SAMPCCR0 Bottom Area Closure Sample Qty

Bottom Area	N (	0.0000	N None	
Long Slope Area	W A7 0 (	4000.0000	+ Add to	SF
Short Slope Area	W LNGSLA0	594.5455	+ Add to	SF
Sample Frequency	W SHSHARE0	921.8182)	B (R) Divide by	SF
Minimum of 6 Samples	N	6264.0000)	> Greater of	SF
	N	6.0000		

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REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
. HANFORD: ER PROGRAM				
SAMPCR0 Bottom Area Closure Sample Qty				6.0000 EA
SAMPML0 Regular LLW Samples - Mobile Lab				
Contaminated Soil	N ( 0.0000	N None		
	W ACSOIL0 ( 511.0000	+ Add to	LCY	
Demolition Waste	W ADWAST0 0.0000)	B (R) Divide by	LCY	
Minimum of 6 ea	N 845.0000)	> Greater of	LCY/HR	
	N 6.0000			
SAMPML0 Regular LLW Samples - Mobile Lab				6.0000 EA
SAMPNC0 Non-Contam Sample Quantity				
Non Contaminated Soil	W ABURDN0 ( 77.4759)	< Lesser of	LCY	
	N 6.0000			
SAMPNC0 Non-Contam Sample Quantity				6.0000 EA
SAMPQ10 QC Samples				
GW Protection Smpls (S3,M21,L60)	N ( 0.0000	N None		
	W A8 0 ( 0.0000	+ Add to	EA	
BOTTOM AREA CLOSURE SAMPLE QTY.	W SAMPCR0 6.0000	+ Add to	EA	
Non-Contam Sample Quantity	W SAMPNC0 6.0000	+ Add to	EA	
Regular LLW Samples - Mobile Lab	W SAMPML0 6.0000)	* Multiply by	EA	
5% QC SAMPLES	N 0.0500)	U Round Up		
MINIMUM QUANTITY, 3 EA	N 1.0000	> Greater of		
	N 3.0000			
SAMPQ10 QC Samples				3.0000 EA
SAMPTF0 Total Off-Site Samples				
Bottom Area Closure Sample Qty	W SAMPCR0 6.0000	+ Add to	EA	
GW Protection Smpls (S3,M21,L60)	W A8 0 0.0000	+ Add to	EA	
QC Samples	W SAMPQ10 3.0000		EA	
SAMPTF0 Total Off-Site Samples				9.0000 EA
SAMPTO0 Total On-Site Samples				
Regular LLW Samples - Mobile Lab	W SAMPML0 6.0000	+ Add to	EA	
Non-Contam Sample Quantity	W SAMPNC0 6.0000		EA	

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SAMPT00 Total On-Site Samples 12.0000 EA

SHSARE0 Short Slope Area

Top Excavation Width	N (	0.0000	N None	
	N (	0.0000	N None	
	W A6 0 (	89.0000	* Multiply by	LF
		2.0000	- Subtract Next	
		3.0000	* Multiply by	
Depth of Excavation	W A9 0	3.0000)	/ Divide by	LF
	N (	2.0000)	* Multiply by	
Depth of Excavation	W A9 0 (	3.0000	/ Divide by	LF
	N	0.5500)	N None	
	N	0.0000)	N None	
	N	0.0000)	* Multiply by	
2 Sides	N	2.0000		

SHSARE0 Short Slope Area 921.8182 SF

SITEPRO Site Perimeter

Top Excavation Length	N (	0.0000	N None	
Add 30 lf to each side	W A5 0 (	59.0000	+ Add to	LF
2 sides	N	60.0000)	* Multiply by	LF
Top Excavation Width	N	2.0000	+ Add to	
Add 30 lf to each side	W A6 0 (	89.0000	+ Add to	LF
2 sides	N	60.0000)	* Multiply by	LF
	N	2.0000)	U Round Up	
	N	1.0000		

SITEPRO Site Perimeter 536.0000 LF

SPREAD0 Spread & Compact Soil Quantity

Borrow to Haul	W BORROW0	488.0000	LCY
SPREAD0 Spread & Compact Soil Quantity		488.0000	LCY

TIMTOTO0 Total Cycle Time for Borrow

Loading Time for Borrow	N (	0.0000	N None	
Truck Capacity	N (	15.0000	/ Divide by	LCY
Total Loading Output	N	219.0000	+ Add to	LCY/HR
Hauling Time for Borrow	N	0.0000	N None	
Hauling Distance for Borrow	W ADISBR0	2.0000	/ Divide by	MILE
Hauling Speed for Borrow	N	30.0000	+ Add to	MPH

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.	HANFORD: ER PROGRAM	REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
Dump Time	N	0.0250	+ Add to			HR
Return Time for Borrow	N	0.0000	N None			
Hauling Distance for Borrow	W ADISBR0	2.0000	/ Divide by			MILE
Return Speed for Borrow	N	40.0000)	* Multiply by			MPH
Convert to minutes	N	60.0000				MIN/HR
TIMTOTO Total Cycle Time for Borrow					12.6096 MIN	
TOTPPE0 Total PPE Sets						
Total Excavation Duraton	W DAYS 0	1.0000	* Multiply by			DAY
2 Changes per day	N	2.0000	* Multiply by			
4 Workers	N	4.0000				
TOTPPE0 Total PPE Sets					8.0000 SETS	
WASTON0 Tonnage of Waste						
Contaminated Soil	W ACSOIL0	511.0000	* Multiply by			LCY
	N	1.5000	+ Add to			TON/LCY
Demolition Waste	W ADWAST0	0.0000	* Multiply by			LCY
	N	1.2700				
WASTON0 Tonnage of Waste					766.5000 TONS	
0 HANFORD: ER PROGRAM					1.0000 EA	
01 Mobilization & Prep Work					1.0000 LS	
01.04.05 Decon Fac. for Const. Equip/Veh.					24.0000 HR	
PRODUCTIVITY		1.0000 HR /HR				
DURATION		24.0000 HR				
1 Laborer Group (3 ea.)	D	24.0000 HR	* Multiply by	3.0000	72.0000 HR	
2 OPERATING ENGINEERS (1 ea)	D	24.0000 HR	* Multiply by	1.0000	24.0000 HR	
4 LOADER/BH, WH, 0.80 CY (0.6 M3),	D	24.0000 HR	* Multiply by	1.0000	24.0000 HR	
5 Small Tools - 3 ea	D	24.0000 HR	* Multiply by	3.0000	72.0000 HR	
01.04.11 Barricades (Install Temp. Fence)						
W SITEPRO		536.0000 LF		1.0000	536.0000 LF	
PRODUCTIVITY		100.0000 LF /HR				
DURATION		5.3600 HR				
1 Laborer Group - 1 (2 ea.)	D	5.3600 HR	* Multiply by	2.0000	10.7200 HR	

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01.04.11. Barricades (Install Temp. Fence)  
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01.04.11. Barricades (Install Temp. FencREFERENCE		REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
2	Truck Drivers (1 ea)	D	5.3600 HR * Multiply by	1.0000	5.3600 HR
3	TRUCK, 20,000 - 25,000 (9072 -	D	5.3600 HR * Multiply by	1.0000	5.3600 HR
4	FLATBED, 8' (2.4 M) X 12' (3.7 M)	D	5.3600 HR * Multiply by	1.0000	5.3600 HR
5	Small Tools - 2 ea	D	5.3600 HR * Multiply by	2.0000	10.7200 HR
6	Materials/Supply Allowance for	P	536.0000 LF * Multiply by	1.0000	536.0000 LF
01.06 Temp Relocatns/Roads/Struct/Util		W QTYLLW0	511.0000 LCY	1.0000	511.0000 LCY
01.06.01 Roads (Site Road Maintenance)		W QTYLLW0	511.0000 LCY	1.0000	511.0000 LCY
Site Road Maintenance		W QTYLLW0	511.0000 LCY * Multiply by	1.0000	511.0000 LCY
02 Monitoring, Sampling, & Analysis					1.0000 LS
02.08.05 Sub-Surface Soil (Field Screen-		W DAYS 0	1.0000 DAY	8.0000	8.0000 HRS
1	ERC Environmental Tech. (.5 ea	P	8.0000 HRS * Multiply by	0.5000	4.0000 HR
2	RADIATION CONTROL TECH. (1 ea)	P	8.0000 HRS * Multiply by	1.0000	8.0000 HR
02.08.91 Excav. GW Prot. Sample Trenches		W A8 0	0.0000 EA	3.0000	0.0000 EA
02.08.92 Site Certificaton Sampling		W SAMPCR0 PRODUCTIVITY DURATION	6.0000 EA 3.0000 EA /HR 2.0000 HR	1.0000	6.0000 EA
1	ERC Sampler (1 ea)	D	2.0000 HR * Multiply by	1.0000	2.0000 HR
2	RADIATION CONTROL TECH. (1 ea)	D	2.0000 HR * Multiply by	1.0000	2.0000 HR
3	Materials/Supplies Allowance	P	6.0000 EA * Multiply by	1.0000	6.0000 EA
02.	Analyze LLW Sample - Mobile Lab	W SAMPML0	6.0000 EA M (R) Multiply by	1.0000	6.0000 EA
02.	Analyze Quality Control Samples	W SAMPQ10	3.0000 EA M (R) Multiply by	1.0000	3.0000 EA
02.	Analyze Site Certification	W SAMPCR0	6.0000 EA M (R) Multiply by	1.0000	6.0000 EA
02.	Groundwater Protection Samples	W A8 0	0.0000 EA M (R) Multiply by	1.0000	0.0000 EA
02.	Non-Contam Sample Quantity	W SAMPNC0	6.0000 EA M (R) Multiply by	1.0000	6.0000 EA
08 Solids Collection & Containment					1.0000 LS
08.01 Contaminated Soil Collection					1.0000 LS
08.01.02.01 Excavate/Load Contaminated Soil		W ACSOIL0 PRODUCTIVITY DURATION	511.0000 LCY 83.0000 LCY/HR 6.1566 HR	1.0000	511.0000 LCY

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08.01.02.01. Excavate/Load Contaminated REFERENCE		REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
1	Heavy Equipment Operator (1 ea)	D	6.1566 HR * Multiply by	1.0000	6.1566 HR
2	HYD EXCAV, CRWLR, 90,200 LBS,	D	6.1566 HR * Multiply by	1.0000	6.1566 HR
08.01.02.02 Provide Dust Suppression					
	W ACSOIL0	511.0000 LCY		1.0000	511.0000 LCY
	PRODUCTIVITY	83.0000 LCY/HR			
	DURATION	6.1566 HR			
1	Heavy Truck Driver	D	6.1566 HR * Multiply by	1.0000	6.1566 HR
2	Trl,Wtr,Off-Hwy, 6000GAL,Cat621E	D	6.1566 HR * Multiply by	1.0000	6.1566 HR
08.01.03 Hauling (To Queue Area)					
	W CONDUR0	1.0000 DAY		8.0000	8.0000 HRS
1	Truck Drivers (3 ea)	P	8.0000 HRS * Multiply by	3.0000	24.0000 HR
2	TRK,HWY, 46,000 GVW, 6X4, 3 AXLE	P	8.0000 HRS * Multiply by	3.0000	24.0000 HR
3	20 Ton Tilt Trailer	P	8.0000 HRS * Multiply by	3.0000	24.0000 HR
08.01.04.01 Excavate and Stockpile					
	W ABURDN0	77.4759 LCY		1.0000	77.4759 LCY
	PRODUCTIVITY	146.0000 LCY/HR			
	DURATION	0.5307 HR			
1	Heavy Equipment Operator (1 ea)	D	0.5307 HR * Multiply by	1.0000	0.5307 HR
2	HYD EXCAV, CRWLR, 90,200 LBS,	D	0.5307 HR * Multiply by	1.0000	0.5307 HR
3	Heavy Truck Driver (2 ea)	D	0.5307 HR * Multiply by	2.0000	1.0613 HR
4	Trk,Off-Hwy,R-Dump, 15-19CY, 25T	D	0.5307 HR * Multiply by	2.0000	1.0613 HR
08.01.04.02 Provide Dust Suppression					
	W ABURDN0	77.4759 LCY		1.0000	77.4759 LCY
	PRODUCTIVITY	146.0000 LCY/HR			
	DURATION	0.5307 HR			
1	Truck Driver (1 ea)	D	0.5307 HR * Multiply by	1.0000	0.5307 HR
2	Trk,Wtr,Off-Hwy, 6000GAL,CAT621E	D	0.5307 HR * Multiply by	1.0000	0.5307 HR
3	Material Cost for Soil Sement	W ABURDN0	77.4759 LCY * Multiply by	1.0000	77.4759 LCY
08.01.91.01 Low Activity Containers					
	W CONDUR0	1.0000 DAY		8.0000	8.0000 HRS
	PRODUCTIVITY	1.0000 HRS/HR			
	DURATION	8.0000 HR			
01	Radiation Control Tech. (3 ea)	P	8.0000 HRS * Multiply by	3.0000	24.0000 HR
08.01.91.02 Decontaminate Containers					
	W CONDUR0	1.0000 DAY		8.0000	8.0000 HR

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08.01.91.02. Decontaminate Containers  
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08.01.91.02. Decontaminate Containers		REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
<hr/>						
		PRODUCTIVITY	1.0000 HR /HR			
		DURATION	8.0000 HR			
1	Laborer (3 ea)	P	8.0000 HR * Multiply by	3.0000	24.0000 S1	
2	WATER BLASTR, COLD WTR, 2500 PSI	P	8.0000 HR * Multiply by	1.0000	8.0000 HR	
3	Small Tools - 3 ea	P	8.0000 HR * Multiply by	3.0000	24.0000 HR	
08.01.92 Queue Area Operations						
		W CONDUR0	1.0000 DAY	8.0000	8.0000 HRS	
		PRODUCTIVITY	1.0000 HRS/HR			
		DURATION	8.0000 HR			
1	Laborers (2 ea)	P	8.0000 HRS * Multiply by	2.0000	16.0000 HR	
2	Radiation Control Tech. (.5 ea)	P	8.0000 HRS * Multiply by	0.5000	4.0000 HR	
3	Container liners	W CONTRK0	40.0000 LOA * Multiply by	1.0000	40.0000 EA	
08.01.93 Radiation Control Tech. Support						
		W DAYS 0	1.0000 DAY	8.0000	8.0000 HRS	
		PRODUCTIVITY	1.0000 HRS/HR			
		DURATION	8.0000 HR			
1	Radiation Control Tech. (1.5 ea)	P	8.0000 HRS * Multiply by	1.5000	12.0000 HR	
08.	Allowance for Mobile Site	W DAYS 0	1.0000 DAY B (R) Divide by	30.0000	0.0000 MO	
08.	ERC PPE (Subcontractor Supplied)	W TOTPPE0	8.0000 SET * Multiply by	1.0000	8.0000 SET	
08.	S/C PPE (Subcontractor Supplied)	W TOTPPE0	8.0000 SET * Multiply by	1.0000	8.0000 SET	
08.01.95.02 Laundry Services						
		PRODUCTIVITY	1.0000 LS /HR			
		DURATION	0.0000 HR			
					0.0000 LS	
	Regulated PPE Laundry	W DAYS 0	1.0000 DAY * Multiply by	8.0000	8.0000 HR	
	Mask Cleaning Services	W DAYS 0	1.0000 DAY B (R) Divide by	30.0000	0.0000 MO	
10.03.02 Demolition						
		W ADWAST0	0.0000 LCY	1.0000	0.0000 LCY	
		PRODUCTIVITY	5.0000 LCY/HR			
		DURATION	0.0000 HR			
01	Laborers (1 ea)	D	0.0000 HR * Multiply by	1.0000	0.0000 HR	
02	Operating Engineers (1 ea)	D	0.0000 HR * Multiply by	1.0000	0.0000 HR	
03	CONC PULVERIZER, 42"THICK, 30"W	D	0.0000 HR * Multiply by	1.0000	0.0000 HR	
04	HYD EXCAV, CRWLR,110,880 LBS,	D	0.0000 HR * Multiply by	1.0000	0.0000 HR	
05	Small Tools (1 ea)	D	0.0000 HR * Multiply by	1.0000	0.0000 HR	

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10.06.01. LSA (Low Specific Activity)  
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10.06.01. LSA (Low Specific Activity)	REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
<hr/>					
10.06.01 LSA (Low Specific Activity)					
	W ADWAST0	0.0000 LCY		1.0000	0.0000 LCY
	PRODUCTIVITY	70.0000 LCY/HR			
	DURATION	0.0000 HR			
01	Operating Engineers (1 ea)	D	0.0000 HR * Multiply by	1.0000	0.0000 HR
02	HYD EXCAV, CRWLR,110,880 LBS,	D	0.0000 HR * Multiply by	1.0000	0.0000 HR
18 Disposal (Other than Commercial)					
				1.0000	LS
18.21 Trans. to Storage/Disp. Facility	W WASTON0	766.5000 TON		1.0000	766.5000 LS
ERDF Transportation Costs	W ERDFQT0	0.0000 TON * Multiply by		1.0000	0.0000 TON
18.22 ERDF Disposal Costs	W WASTON0	766.5000 TON		1.0000	766.5000 LS
Disposal Facility Fees & Taxes	W ERDFQT0	0.0000 TON * Multiply by		1.0000	0.0000 TON
20 Site Restoration					
				1.0000	LS
20.01.03 Load/Haul Borrow (Backfill)	W SPREAD0	488.0000 LCY		1.0000	488.0000 LCY
	PRODUCTIVITY	219.0000 LCY/HR			
	DURATION	2.2283 HR			
1	Heavy Equipment Operator	D	2.2283 HR * Multiply by	1.0000	2.2283 HR
2	Ldr,FE, WH, 4.50 CY, Artic, 966E	D	2.2283 HR * Multiply by	1.0000	2.2283 HR
3	Heavy Truck Driver	W DURB0R0	8.9132 HRS * Multiply by	1.0000	8.9132 HR
4	Trk,Off-Hwy,R-Dump, 15-19CY, 25T	W DURB0R0	8.9132 HRS * Multiply by	1.0000	8.9132 HR
20.01.06 Spreading (Spread/Comp. Borrow)					
	W SPREAD0	488.0000 LCY		1.0000	488.0000 LCY
	PRODUCTIVITY	219.0000 LCY/HR			
	DURATION	2.2283 HR			
1	Heavy Truck Driver (1 ea)	D	2.2283 HR * Multiply by	1.0000	2.2283 HR
2	Trk,Wtr,Off-Hwy, 6000GAL,Cat621E	D	2.2283 HR * Multiply by	1.0000	2.2283 HR
3	Heavy Equipment Operator (1 ea)	D	2.2283 HR * Multiply by	1.0000	2.2283 HR
4	DOZER, CRWLR, 251-300 HP	D	2.2283 HR * Multiply by	1.0000	2.2283 HR
20.04.01 Mech. Seeding with Fertilizer					
	W AREAST0	17731.0000 SF		43560.0000	0.4070 ACR
	PRODUCTIVITY	1.0000 ACR/HR			
	DURATION	0.4070 HR			

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20.04.01. Mech. Seeding with Fertilizer  
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20.04.01. Mech. Seeding with Fertilizer REFERENCE		REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
1	Operating Engineers (2 ea)	D	0.4070 HR * Multiply by	2.0000	0.8141 HR
2	4 Wheel Drive Tractor (Farm)	D	0.4070 HR * Multiply by	2.0000	0.8141 HR
3	Mulch Spreader (1 ea)	D	0.4070 HR * Multiply by	1.0000	0.4070 HR
4	Tiller (1 ea)	D	0.4070 HR * Multiply by	1.0000	0.4070 HR
5	Primary Seeder (1 ea)	D	0.4070 HR * Multiply by	1.0000	0.4070 HR
6	Seed, Fertilizer and Mulch	P	0.4070 ACR * Multiply by	1.0000	0.4070 ACR
20.04.04 Shrubs/Trees/Groundcover					
	W AREAST0	17731.0000 SF		43560.0000	0.4070 ACR
	PRODUCTIVITY	1.0000 ACR/HR			
	DURATION	0.4070 HR			
	Laborers (6 ea)	D	0.4070 HR * Multiply by	6.0000	2.4423 HR
	Grade 23 Supervision (1 EA)	D	0.4070 HR * Multiply by	1.0000	0.4070 HR
	Trk,Hwy, 8,800GVW,4X4, 3/4T-Pkup	D	0.4070 HR * Multiply by	1.0000	0.4070 HR
	Small tools (6 ea)	D	0.4070 HR * Multiply by	6.0000	2.4423 HR
	Tubling Cost	W AREAST0	17731.0000 SF / Divide by	43560.0000	0.4070 ACR
20.04.91 Irrigation					
	W AREAST0	17731.0000 SF		43560.0000	0.4070 ACR
	PRODUCTIVITY	0.0610 ACR/HR			
	DURATION	6.6721 HR			
1	Truck Driver	D	6.6721 HR * Multiply by	1.0000	6.6729 HR
2	Trk,Hwy, 43,000 GVW, 6X4, 3 Axle	D	6.6721 HR * Multiply by	1.0000	6.6729 HR
3	Trlr,Water Tanker,4000Gal (1 ea)	D	6.6721 HR * Multiply by	1.0000	6.6729 HR
5	2" Dist. lines w/ Sprinkler Hds.	P	0.4070 ACR * Multiply by	1.0000	0.4070 ACR
21 Demobilization					1.0000 LS
21.01. 5 Remove Decontamination Area					16.0000 HRS
	Laborers (3 ea)	P	16.0000 HRS * Multiply by	3.0000	48.0000 HR
	Small Tools (3 ea)	P	16.0000 HRS * Multiply by	3.0000	48.0000 HR
	LOADER/BH, WH, 0.80 CY (0.6 M3),	P	16.0000 HRS * Multiply by	1.0000	16.0000 HR
	Operating Engineers (1 ea)	P	16.0000 HRS * Multiply by	1.0000	16.0000 HR
	Trk,Off-Hwy,R-Dump, 15-19CY, 25T	P	16.0000 HRS * Multiply by	1.0000	16.0000 HR
	Truck Driver (1 ea)	P	16.0000 HRS * Multiply by	1.0000	16.0000 HR
21.01.11 Barricades (Remove Temp. Fence)					
	W SITEPRO	536.0000 LF		1.0000	536.0000 LF
	PRODUCTIVITY	200.0000 LF / HR			
	DURATION	2.6800 HR			
1	Laborers (2 ea)	D	2.6800 HR * Multiply by	2.0000	5.3600 HR
2	Small Tools (2 ea)	D	2.6800 HR * Multiply by	2.0000	5.3600 HR

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21.01.11. Barricades (Remove Temp. Fence)  
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21.01.11. Barricades (Remove Temp. Fence)		REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
3	Truck Drivers (1 ea)	D	2.6800 HR	* Multiply by	1.0000	2.6800 HR
4	TRUCK, 20,000 - 25,000 (9072 -	D	2.6800 HR	* Multiply by	1.0000	2.6800 HR
5	FLATBED, 8' (2.4 M) X 12' (3.7 M)	D	2.6800 HR	* Multiply by	1.0000	2.6800 HR
21.01.25 Roads & Parking (Scarify Roads)						0.5000 HRS
Operating Engineers (1 ea)	P	0.5000 HRS	* Multiply by	1.0000	0.5000 HR	
Grader, Motor, Artic, Cat 12-G	P	0.5000 HRS	* Multiply by	1.0000	0.5000 HR	
5 Shank Ripper/Scarifyer (1 ea)	P	0.5000 HRS	* Multiply by	1.0000	0.5000 HR	
21.01.91 Misc. Cleanup Allowance						8.0000 HRS
1	Laborers (2 ea)	P	8.0000 HRS	* Multiply by	2.0000	16.0000 HR
2	Small Tools (2 ea)	P	8.0000 HRS	* Multiply by	2.0000	16.0000 HR
3	Truck Drivers (1 ea)	P	8.0000 HRS	* Multiply by	1.0000	8.0000 HR
4	TRUCK, 20,000 - 25,000 (9072 -	P	8.0000 HRS	* Multiply by	1.0000	8.0000 HR
5	FLATBED, 8' (2.4 M) X 12' (3.7 M)	P	8.0000 HRS	* Multiply by	1.0000	8.0000 HR
70.	ERC Cost/Scheduling Engineer	W DAYPRO0	14.0000 DAY	* Multiply by	2.6900	37.6600 HR
70.	ERC Design Engineer	W DAYPRO0	14.0000 DAY	* Multiply by	1.7200	24.0800 HR
70.	ERC Project Engineer	W DAYPRO0	14.0000 DAY	* Multiply by	2.2700	31.7800 HR
70.	ERC Environmental Compliance	W DAYPRO0	14.0000 DAY	* Multiply by	0.0000	0.0000 HR
70.	ERC Procurement	W DAYPRO0	14.0000 DAY	* Multiply by	1.6500	23.1000 HR
70.	ERC Project Management	W DAYPRO0	14.0000 DAY	* Multiply by	3.3400	46.7600 HR
70.	ERC Quality Assurance	W DAYPRO0	14.0000 DAY	* Multiply by	0.5400	7.5600 HR
70.	ERC Field Support	W DAYPRO0	14.0000 DAY	* Multiply by	8.5200	119.2800 HR
70.	ERC Administrative Services	W DAYPRO0	14.0000 DAY	* Multiply by	1.4100	19.7400 HR
70.	ERC Rad Con Engineer	W DAYPRO0	14.0000 DAY	* Multiply by	0.4600	6.4400 HR
70.	ERC Safety Engineer	W DAYPRO0	14.0000 DAY	* Multiply by	1.4200	19.8800 HR
XXX.	Demolition Waste	W A4 0	0.0000 BCF	* Multiply by	1.0000	0.0000 BCF
XXX.	Non-Contaminated Soil	W A1 0	1819.0000 BCF	* Multiply by	1.0000	1819.0000 BCF
XXX.	Contaminated Soil	W A3 0	12000.0000 BCF	* Multiply by	1.0000	12000.0000 BCF
XXX.	Top Excavation Length	W A5 0	59.0000 LF	* Multiply by	1.0000	59.0000 LF
XXX.	Top Excavation Width	W A6 0	89.0000 LF	* Multiply by	1.0000	89.0000 LF
XXX.	Bottom Area	W A7 0	4000.0000 SF	* Multiply by	1.0000	4000.0000 SF
XXX.	Hauling Distance for Borrow	W ADISBR0	2.0000 MIL	* Multiply by	1.0000	2.0000 MI
XXX.	Groundwater Protection Samples	W A8 0	0.0000 EA	* Multiply by	1.0000	0.0000 EA
XXX.	Depth of Excavation	W A9 0	3.0000 LF	* Multiply by	1.0000	3.0000 LF
XXX.	Include ERDF Costs? 1=yes 0=no	W A10 0	0.0000 YES	* Multiply by	1.0000	0.0000 Y/N
XXX.	Non-Contaminated Soil - Reduced	W ABURDN0	77.4759 LCY	* Multiply by	1.0000	77.4759 LCY
XXX.	Contaminated Soil	W ACSOIL0	511.0000 LCY	* Multiply by	1.0000	511.0000 LCY
XXX.	Site Area	W AREAST0	17731.0000 SF	* Multiply by	1.0000	17731.0000 SF
XXX.	Borrow	W SPREAD0	488.0000 LCY	* Multiply by	1.0000	488.0000 LCY
XXX.	Total Project Duration	W DAYPRO0	14.0000 DAY	* Multiply by	1.0000	14.0000 DAY
XXX.	Total Excavation Duration	W DAYS 0	1.0000 DAY	* Multiply by	1.0000	1.0000 DAY
XXX.	Low Level Waste (LLW) Volume	W QTYLLW0	511.0000 LCY	* Multiply by	1.0000	511.0000 LCY
XXX.	Regular LLW Samples - Mobile Lab	W SAMPML0	6.0000 EA	* Multiply by	1.0000	6.0000 EA
XXX.	Bottom Area Closure Sample Qty.	W SAMPCR0	6.0000 EA	* Multiply by	1.0000	6.0000 EA
XXX.	QC Sample Quantity and Analysis	W SAMPQ10	3.0000 EA	* Multiply by	1.0000	3.0000 EA

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XXX.YY. Additional Quantities  
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XXX.YY. Additional Quantities	REFERENCE	REF VALUE	OPERATOR	LOCAL INPUT	QUANTITY UOM
XXX. Non-Contaminated Sample Quantity	W SAMPNC0	6.0000 EA	* Multiply by	1.0000	6.0000 EA
XXX. Site Perimeter	W SITEPRO	536.0000 LF	* Multiply by	1.0000	536.0000 LF
XXX. Spread/Compact Soil Quantity	W SPREAD0	488.0000 LCY	* Multiply by	1.0000	488.0000 LCY
XXX. Total On-Site Samples	W SAMPTO0	12.0000 EA	* Multiply by	1.0000	12.0000 EA
XXX. Total Off-Site Samples	W SAMPTF0	9.0000 EA	* Multiply by	1.0000	9.0000 EA
XXX. Waste Tonnage to ERDF	W WASTON0	766.5000 TON M	(R) Multiply by	1.0000	767.0000 EA

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DETAILED ESTIMATE

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
01. Mobilization & Prep Work

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DETAIL PAGE 1

01.01. Mobilize Equipment & Facilities	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
01. Mobilization & Prep Work									
01.01. Mobilize Equipment & Facilities									
Note:									
1.	Mob and demob will be one or two times per reactor area or 300 area depending on size. Estimates for mob and demob are completed apart from the waste site MCACES estimates on an EXCEL model, and will reflect the equipment and facility requirements called for in the models.								
2.	Mobilization of facilities such as office trailers, etc, (i.e. General Contractor mobilization) are excluded.								
TOTAL Mobilize Equipment & Facilities				0	0	0	0	0	0
01.04. Setup/Construct Temp Facilities									
01.04.05. Decon Fac. for Const. Equip/Veh. (Construct Decon Areas)									
Notes:									
The duration for this activity is 24 hours.									
BLT S1 Laborer Group (3 ea.)	72.00	HR	11786	29.73 2,141	0.00 0	0.00 0	0.00 0	29.73 2,141	29.73
BLT S1 OPERATING ENGINEERS (1 ea)	24.00	HR	11788	33.74 810	0.00 0	0.00 0	0.00 0	33.74 810	33.74
GEN S1 LOADER/BH, WH, 0.80 CY (0.6 M3), F/E BKT 30" (762 MM) DIPPER (1 ea)	24.00	HR	L50Z4640	0.00 0	12.72 305	0.00 0	0.00 0	12.72 305	12.72
FPC S1 Small Tools - 3 ea	72.00	HR	XMIIXX020	0.00 0	1.57 113	0.00 0	0.00 0	1.57 113	1.57
M USR S1 Construction Materials/Supplies Allowance	1.00	LS		0.00 0	0.00 0	2160.00 2,160	0.00 0	2160.00 2,160	2160.00
M USR S1 Allowance for Tank Assume 1000 gal plastic tank for water collection	1.00	LS		0.00 0	0.00 0	1620.00 1,620	0.00 0	1620.00 1,620	1620.00
TOTAL Decon Fac. for Const. Equip/Veh.	24.00	HR		2,950	418	3,780	0	7,149	297.86

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01. Mobilization & Prep Work

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01.04. Setup/Construct Temp Facilities	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
-----							
01.04.11. Barricades (Install Temp. Fence)							
Notes:							
Install construction barricade fence. The barricade is assumed to be located 30 ft. from the top of excavation.							
Output:							
Production rate = 100 LF/HR							
Material supply allowance is \$1.75/LF							
BLT S1 Laborer Group - 1 (2 ea.)	10.72 HR 11786	29.73 319	0.00 0	0.00 0	0.00 0	29.73 319	29.73
BLT S1 Truck Drivers (1 ea)	5.36 HR 11792	34.51 185	0.00 0	0.00 0	0.00 0	34.51 185	34.51
GEN S1 TRUCK, 20,000 - 25,000 (9072 - 11 340 KG) GVW 4X2, 2 AXLE (1 ea)	5.36 HR T50Z7400	0.00 0	14.03 75	0.00 0	0.00 0	14.03 75	14.03
GEN S1 FLATBED, 8' (2.4 M) X 12' (3.7 M) (ADD 20,000 - 25,000 GVW TRK) (1 ea)	5.36 HR T40Z6960	0.00 0	0.70 4	0.00 0	0.00 0	0.70 4	0.70
FPC S1 Small Tools - 2 ea	10.72 HR XMIXX020	0.00 0	1.57 17	0.00 0	0.00 0	1.57 17	1.57
M USR S1 Materials/Supply Allowance for Fence	536.00 LF	0.00 0	0.00 0	1.89 1,013	0.00 0	1.89 1,013	1.89
TOTAL Barricades (Install Temp. Fence)	536.00 LF	504	96	1,013	0	1,613	3.01

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01. Mobilization & Prep Work

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01.04. Setup/Construct Temp Facilities	QUANTITY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
01.04.91. Waste Site Survey									
USR S1 Allowance for Site Survey	1.00	LS		0.00 0	0.00 0	0.00 0	1600.00 1,600	1600.00 1,600	1600.00 1,600
TOTAL Waste Site Survey				0	0	0	1,600	1,600	
TOTAL Setup/Construct Temp Facilities				3,454	514	4,793	1,600	10,361	

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01. Mobilization & Prep Work

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01.06. Temp Relocatns/Roads/Struct/Util	QUANTY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
01.06. Temp Relocatns/Roads/Struct/Util							
Notes:							
The unit rate is an allowance created using a detailed estimate on sites in the 100-BC Area, and by pro-rating to a cost/LCY of contaminated soil.							
This cost is for in-situ gravel access roads, and for asphalt repairs.							
01.06.01. Roads (Site Road Maintenance)							
Notes:							
The unit rate of \$.58/LCY is from a separate EXCEL spreadsheet (Ref.EAR #327, ROADM5.xls) . Road length is assumed to be 625 LF. Asphalt patching is assumed at 1 time per 300 SY of road. Dust suppression is assumed to be 1 pass.							
USR S1 Site Road Maintenance	511.00 LCY	0.00 0	0.00 0	0.00 0	0.58 296	0.58 296	0.58
TOTAL Roads (Site Road Maintenance)	511.00 LCY	----- 0	----- 0	----- 0	----- 296	----- 296	0.58
TOTAL Temp Relocatns/Roads/Struct/Util	511.00 LCY	----- 0	----- 0	----- 0	----- 296	----- 296	0.58
TOTAL Mobilization & Prep Work		3,454	514	4,793	1,896	10,658	

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02. Monitoring, Sampling, & Analysis

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02.08. Sampling Rad Contaminated Media	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
02. Monitoring, Sampling, & Analysis							
02.08. Sampling Rad Contaminated Media							
(Radiation Monitoring)							
02.08.05. Sub-Surface Soil (Field Screening/Take Samples)							
Notes:							
Duration for this activity is equal to the excavation/demolition duration.							
It is assumed that the Rad. Control Technician will be present during all							
excavation/demolition activities.							
ERC AB ERC Environmental Tech. (.5 ea	4.00 HR 31000	67.63 271	0.00 0	0.00 0	0.00 0	67.63 271	67.63
HAM AB RADIATION CONTROL TECH. (1 ea)	8.00 HR 10T17	57.98 464	0.00 0	0.00 0	0.00 0	57.98 464	57.98
TOTAL Sub-Surface Soil (Field Screen-	8.00 HRS	734	0	0	0	734	91.79

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02.08. Sampling Rad Contaminated Media	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
02.08.91. Excav. GW Prot. Sample Trenches									
Note: Number of trenches are yet to be determined by the project (for groundwater protection samples). Trench cost is \$750/ea. Since the projects have not decided if this work is needed it is set at \$0 for now.									
TOTAL Excav. GW Prot. Sample Trenches				0	0	0	0	0	0
02.08.92. Site Certificaton Sampling									
Note: Activity includes the collection of certification samples for an area equal to the bottom area plus all side slopes.									
Sample Frequency = 1 sample/6264 SF (Minimum of 6) Production Rate = 3 samples/crew hr.									
ERC AB ERC Sampler (1 ea)	2.00	HR	31751	43.72 87	0.00 0	0.00 0	0.00 0	43.72 87	43.72
HAM AB RADIATION CONTROL TECH. (1 ea)	2.00	HR	10T17	57.98 116	0.00 0	0.00 0	0.00 0	57.98 116	57.98
M USR AB Materials/Supplies Allowance	6.00	EA		0.00 0	0.00 0	5.40 32	0.00 0	5.40 32	5.40
TOTAL Site Certificaton Sampling	6.00	EA		203	0	32	0	236	39.30
TOTAL Sampling Rad Contaminated Media				938	0	32	0	970	

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02.10. Radioactive Waste Analysis	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
02.10. Radioactive Waste Analysis									
02.10.05. Rad. Anal. Veg./Sediment/Soil									
(Sample Analytical Costs, Mobile lab & Offsite)									
Notes:									
1. LLW Samples - Sample frequency is 1 per 845 LCY with a minimum of 6. Cost per sample is \$1,100/Sample.									
2. QC Samples - 5% of all samples, minimum of 3 ea. Cost is \$2,000/ea.									
3. Site Certification Samples - Sample Frequency is 1 per 6264 SF of exposed area with a min. of 6 ea. Exposed area includes bottom area and all side slopes. Cost is \$2,000/ea.									
4. Groundwater Protection Samples - These are retained in the model but set to show no cost until it is decided if this is required. Sample cost is \$2,000/ea.									
5. Non-Contam. Samples - Sample frequency is total of 6 samples per site except for sites less than 6 LCY where it will be 1 sample per LCY. Sample cost is \$1,100/ea.									
USR AB Analyze LLW Sample - Mobile Lab Assume 1 sample per 845 LCYs of Contaminated Soil. Minimum of 6 sample.	6.00	EA		0.00 0	0.00 0	0.00 0	1100.00 6,600	1100.00 6,600	1100.00
USR AB Analyze Quality Control Samples - Off-Site Lab Assume 5% of the sum of all other samples. Minimum of 3 sample.	3.00	EA		0.00 0	0.00 0	0.00 0	2000.00 6,000	2000.00 6,000	2000.00
USR AB Analyze Site Certification Samples - On-Site Lab Assume 1 sample per 6,264 sq ft of bottom area plus side slope areas. Minimum of 6 samples.	6.00	EA		0.00 0	0.00 0	0.00 0	2000.00 12,000	2000.00 12,000	2000.00
USR AB Non-Contam Sample Quantity Assume 6 samples per site except for sites less than 6 LCY where it will be 1 sample per LCY.	6.00	EA		0.00 0	0.00 0	0.00 0	1100.00 6,600	1100.00 6,600	1100.00
TOTAL Rad. Anal. Veg./Sediment/Soil				0	0	0	31,200	31,200	
TOTAL Radioactive Waste Analysis				0	0	0	31,200	31,200	
TOTAL Monitoring, Sampling, & Analysis				938	0	32	31,200	32,170	

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08.01. Contaminated Soil Collection	QUANTY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08. Solids Collection & Containment							
08.01. Contaminated Soil Collection							
(Excavate/Haul)							
08.01.02. Excavation (Contaminated Soil)							
08.01.02.01. Excavate/Load Contaminated Soil							
Work to be Performed:							
Excavate contaminated soil/buried waste by hydraulic excavator.							
Assumptions:							
1. A 15% swell factor has been applied to bank soil volume.							
2. Excavation rate is 83 LCY/HR (664 LCY/DAY)							
L USR S1 Heavy Equipment Operator (1 ea) - 1 ea	6.16 HR	30.82 190	0.00 0	0.00 0	0.00 0	30.82 190	30.82
EP S1 HYD EXCAV, CRWLR, 90,200 LBS, 2.38 CY BKT - 1 ea.	6.16 HR H25HI011	0.00 0	88.72 546	0.00 0	0.00 0	88.72 546	88.72
TOTAL Excavate/Load Contaminated Soil	511.00 LCY	190	546	0	0	736	1.44

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
-----							
08.01.02.02. Provide Dust Suppression							
Work to be Performed: Suppress dust by water spray.							
Output: Duration is equal to the duration of contaminated soil excavation.							
BLT S1 Heavy Truck Driver - 1 ea	6.16 HR 11792	34.51 212	0.00 0	0.00 0	0.00 0	34.51 212	34.51
FPC S1 Trl,Wtr,Off-Hwy, 6000GAL,Cat621E 6000 GALLON WITH CAT 621E TRAC - 1 ea	6.16 HR T60KI002	0.00 0	60.15 370	0.00 0	0.00 0	60.15 370	60.15
TOTAL Provide Dust Suppression	511.00 LCY	----- 212	----- 370	----- 0	----- 0	----- 583	----- 1.14
TOTAL Excavation (Contaminated Soil)		----- 402	----- 917	----- 0	----- 0	----- 1,319	

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.03. Hauling (To Queue Area)							
Note: Haulage of contaminated soils and demolition debris from the excavation to the Queue area. Assume 3 trucks for the operation. Duration is equal to time when contaminated soil and debris are being excavated.							
BLT S1 Truck Drivers (3 ea)	24.00 HR 11792	34.51 828	0.00 0	0.00 0	0.00 0	34.51 828	34.51
MIL S1 TRK,HWY, 46,000 GVW, 6X4, 3 AXLE (3 ea.)	24.00 HR T50PE002	0.00 0	36.62 879	0.00 0	0.00 0	36.62 879	36.62
USR S1 20 Ton Tilt Trailer (For trucks to haul ERDF containers) (3 ea)	24.00 HR YA1	0.00 0	3.28 79	0.00 0	0.00 0	3.28 79	3.28
TOTAL Hauling (To Queue Area)	8.00 HRS	----- 828	----- 958	----- 0	----- 0	1,786	223.23

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.04. Stockpiling (Exc. Overburden)							
08.01.04.01. Excavate and Stockpile							
Work to be Performed:							
Excavate overburden by hydraulic excavator and haul to stockpile. Assume 2 ea, 15 cy dump trucks per excavator.							
Production Rate:							
146 loose cu yd per crew hour							
BLT S1 Heavy Equipment Operator (1 ea) - 1 ea.	0.53 HR 11788	33.74 18	0.00 0	0.00 0	0.00 0	33.74 18	33.74
EP S1 HYD EXCAV, CRWLR, 90,200 LBS, 2.38 CY BKT - 1 ea.	0.53 HR H25HI011	0.00 0	88.72 47	0.00 0	0.00 0	88.72 47	88.72
BLT S1 Heavy Truck Driver (2 ea)	1.06 HR 11792	34.51 37	0.00 0	0.00 0	0.00 0	34.51 37	34.51
MIL S1 Trk,Off-Hwy,R-Dump, 15-19CY, 25T (2 ea)	1.06 HR T55DJ002	0.00 0	34.06 36	0.00 0	0.00 0	34.06 36	34.06
TOTAL Excavate and Stockpile	77.48 LCY	55	83	0	0	138	1.78

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
-----							
08.01.04.02. Provide Dust Suppression							
Work to be Performed: Suppress dust by water spray. Apply crusting agent to stockpiled soil at the rate of 1 gal per 77 LCY.							
Output: Duration is equal to excavation duration for the overburden excavation.							
BLT S1 Truck Driver (1 ea) - 1 ea	0.53 HR 11792	34.51 18	0.00 0	0.00 0	0.00 0	34.51 18	34.51
FPC S1 Trk,Wtr,Off-Hwy, 6000GAL,CAT621E 6000 GALLON WITH CAT 621E TRAC - 1 ea	0.53 HR T60KI002	0.00 0	60.15 32	0.00 0	0.00 0	60.15 32	60.15
M USR S1 Material Cost for Soil Sement Agent, Assume 1 gal of Soil-Sement per 77 LCYs of non-contaminated soil.	77.48 LCY	0.00 0	0.00 0	0.04 3	0.00 0	0.04 3	0.04
TOTAL Provide Dust Suppression	77.48 LCY	----- 18	----- 32	----- 3	----- 0	----- 54	0.69
TOTAL Stockpiling (Exc. Overburden)		----- 73	----- 115	----- 3	----- 0	----- 191	

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.91. Frisking Tent Operations (Survey & Decon Trucks and Containers)							
08.01.91.01. Low Activity Containers (Frisk Containers/Trucks)							
<p>Note: Frisking tent operation is assumed to occur only during the excavation of the contaminated material portion of the work scope.</p>							
USR AB Radiation Control Tech. (3 ea)	24.00 HR	48.46 1,163	0.00 0	0.00 0	0.00 0	48.46 1,163	48.46
TOTAL Low Activity Containers	8.00 HRS	----- 1,163	0	0	0	1,163	145.38

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.91.02. Decontaminate Containers (Prepare Containers for Shipment)							
Work to be Performed: Close liner, secure tarp and spray/decon waste containers, if contaminated, prior to transport to disposal facility. Water is recycled for contaminated dust suppression							
Crew and Equipment: Fixed Price Contractor: 3 ea. Laborers Equipment: 1 ea. Pressure washer and 1 ea. 1,000 gal. portable water tank (cost included in construction cost).							
Output: Duration is equal to the duration of the excavation/haul activities in the contaminated zone.							
BLT S1 Laborer (3 ea)	24.00 S1 11786	29.73 714	0.00 0	0.00 0	0.00 0	29.73 714	29.73 29.73
EP S1 WATER BLASTR, COLD WTR, 2500 PSI , 4 GPM - 1 ea.	8.00 HR W25SD005	0.00 0	3.87 31	0.00 0	0.00 0	3.87 31	3.87 3.87
FPC S1 Small Tools - 3 ea	24.00 HR XMIXX020	0.00 0	1.57 38	0.00 0	0.00 0	1.57 38	1.57 1.57
TOTAL Decontaminate Containers	8.00 HR	714	69	0	0	782	97.77
TOTAL Frisking Tent Operations		1,877	69	0	0	1,945	

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.92. Queue Area Operations							
Note: Includes installation of liners into containers and misc. activities necessary in queue area for the duration of the contaminated material excavation. Each container receives a liner. The quantity of container liners is based on the number of containers to be moved calculated at 12.87 LCY per container. Duration is the timeframe when contaminated soil and demolition waste are being excavated and hauled.							
BLT S1 Laborers (2 ea)	16.00 HR 11786	29.73 476	0.00 0	0.00 0	0.00 0	29.73 476	29.73
HAM AB Radiation Control Tech. (.5 ea)	4.00 HR 10T17	57.98 232	0.00 0	0.00 0	0.00 0	57.98 232	57.98
USR S1 Container liners	40.00 EA	0.00 0	0.00 0	24.31 972	0.00 0	24.31 972	24.31
TOTAL Queue Area Operations	8.00 HRS	708	0	972	0	1,680	210.00

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.93. Radiation Control Tech. Support							
Notes:							
Crew and Equipment:							
Rad Control Techs. - 1.5 ea.							
Duration:							
Total Excavation Duration							
HAM AB Radiation Control Tech. (1.5 ea)	12.00 HR 10T17	57.98 696	0.00 0	0.00 0	0.00 0	57.98 696	57.98
TOTAL Radiation Control Tech. Support	8.00 HRS	696	0	0	0	696	86.97

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
08.01.94. Site Lighting Assumption is that no site lighting will be necessary since all work is assumed to be during daylight hours.		0	0	0	0	0	
TOTAL Site Lighting						0	

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.95. PPE (Personal Prot. Clothing)							
08.01.95.01. PPE (Subcontractor Supplied)							
Note:							
Disposable PPE @ \$9.50/set (excluding sales tax), 2 changes per day for 4 ERC personnel and 4 subcontractor personnel for the duration of contaminated material excavation.							
USR S1 ERC PPE (Subcontractor Supplied)	8.00 SET	0.00 0	0.00 0	10.26 82	0.00 0	10.26 82	10.26 10.26
USR S1 S/C PPE (Subcontractor Supplied)	8.00 SET	0.00 0	0.00 0	10.26 82	0.00 0	10.26 82	10.26 10.26
TOTAL PPE (Subcontractor Supplied)		0	0	164	0	164	

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
08.01.95.02. Laundry Services (No Cost item)							
Note: This item has been deactivated. It remains in the model for possible future use. Rates should be reviewed and updated.		0	0	0	0	0	0
TOTAL Laundry Services		-----	-----	-----	-----	-----	-----
		0	0	164	0	164	
TOTAL PPE (Personal Prot. Clothing)		-----	-----	-----	-----	-----	-----
		0	0	164	0	164	

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08.01. Contaminated Soil Collection	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
-----							
08.01.96. Personnel Training							
Note: This account is an allowance for RAD personnel training. It is assumed that multiple sites within an Operable Unit (OU) will be remediated by the same general contractor. Personnel training may not be required for every site within an OU. However, an allowance is being made for personnel changes during the life of the contract.							
USR S1 8-Hour Supervisor Course	0.50 EA	0.00 0	0.00 0	0.00 0	300.00 150	300.00 150	300.00
USR S1 40 Hour Site Specific Training	2.00 EA	0.00 0	0.00 0	0.00 0	1200.00 2,400	1200.00 2,400	1200.00
USR S1 Fundamentals of Radiation Safety	2.00 EA	0.00 0	0.00 0	0.00 0	600.00 1,200	600.00 1,200	600.00
TOTAL Personnel Training		0 ----- -----	0 ----- -----	0 ----- -----	3,750 ----- -----	3,750 ----- -----	
TOTAL Contaminated Soil Collection		4,583 ----- -----	2,058 ----- -----	1,140 ----- -----	3,750 ----- -----	11,531 ----- -----	
TOTAL Solids Collection & Containment		4,583 ----- -----	2,058 ----- -----	1,140 ----- -----	3,750 ----- -----	11,531 ----- -----	

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10. Drums/Tanks/Structures/Misc.

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10.03. Structure Removal	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
10. Drums/Tanks/Structures/Misc. (Demolition and Removal)							
10.03. Structure Removal							
10.03.02. Demolition (Demolish concrete Structures)							
Note: Production rate is 5 LCY/Hr							
TOTAL Demolition	HR	0	0	0	0	0	0
TOTAL Structure Removal		0	0	0	0	0	0

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10.06. Radioactive Specific Waste	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
10.06. Radioactive Specific Waste							
Containment (Furnish/Fill)							
10.06.01. LSA (Low Specific Activity)							
Shipping Containers (Loading Demolition Waste)							
Notes:							
1. Production Rate is 70 LCY/Hr							
2. This activity includes only the loading of the demolition waste prior							
to hauling it to the Queue area. The haulage from the hole to the							
Queue area is covered in 08.01.03 (Hauling to Queue Area).							
TOTAL LSA (Low Specific Activity)	HR	0	0	0	0	0	0
TOTAL Radioactive Specific Waste		0	0	0	0	0	0
TOTAL Drums/Tanks/Structures/Misc.		0	0	0	0	0	0

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PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
18. Disposal (Other than Commercial)

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18.21. Trans. to Storage/Disp. Facility	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
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18. Disposal (Other than Commercial)  
18.21. Trans. to Storage/Disp. Facility

Note:

This is the cost of transporting the contaminated waste from the queue area to the ERDF facility. These costs are covered in the ERDF ADS. In the event that the ERDF transportation costs are desired in this model this feature may be changed to provide the cost for ERDF Transportation.

Material density used is 1.73 ton/BCY (1.5 ton/LCY @ 15% swell).  
Demolition waste density = 1.27 ton/lcy @ 150 lbs/CF and 60% swell.

Material to be transported is contaminated soil and demolition waste. The limit per truck is 19.3 Tons.

The unit cost per ton (\$14.30) does not include DD and G&A.

TOTAL Trans. to Storage/Disp. Facility	TON	0	0	0	0	0	0
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18. Disposal (Other than Commercial)

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18.22. ERDF Disposal Costs	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
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18.22. ERDF Disposal Costs

Notes:

Disposal fees are covered in the ERDF ADS except if other disposal areas are used that require a fee. In that case, a per ton cost will be entered here to include the disposal costs associated with the individual waste site. Also, in the event that the ERDF fees are required to be in this model (FFS estimates for example) this model can be changed to show this cost for the ERDF disposal fees.

The current rate in the model is \$14.26/Ton. (without DD and G&A)

TOTAL ERDF Disposal Costs	TON	0	0	0	0	0
TOTAL Disposal (Other than Commercial)		0	0	0	0	0

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
20. Site Restoration

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20.01. Earthwork	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
20. Site Restoration									
20.01. Earthwork									
20.01.03. Load/Haul Borrow (Backfill)									
 <b>Assumptions:</b>									
1. Assume borrow available on-site. No charge for material.									
2. 10% added to account for compaction.									
3. Hauling speed is 30 mph. Return speed is 40 mph.									
4. Truck capacity is 15 loose cu yd, based on the following:									
- Average soil density at Hanford = 1.73ton/BCY									
- Weight limit on Hanford roads = 80,000 lbs									
- Weight of dump truck = 30,000 lbs									
5. Truck dump time is 1.5 minutes.									
6. Dust control is not covered here because it is covered in the placement item. One water truck will cover both.									
 <b>Output:</b>									
1. 219 LCY per crew hour (this is an 8 hr/day rate working 6.5 hr/shift)									
This rate is driven by the capacity of a 4.5 LCY loader.									
BLT S1 Heavy Equipment Operator - 1 ea	2.23	HR	11788	33.74 75	0.00 0	0.00 0	0.00 0	33.74 75	33.74
UPB S1 Ldr,FE, WH, 4.50 CY, Artic, 966E (1 ea)	2.23	HR	L40CA006	0.00 0	59.79 133	0.00 0	0.00 0	59.79 133	59.79
BLT S1 Heavy Truck Driver Quantity calculated by parameter worksheet.	8.91	HR	11792	34.51 308	0.00 0	0.00 0	0.00 0	34.51 308	34.51
MIL S1 Trk,Off-Hwy,R-Dump, 15-19CY, 25T (number of trucks is determined by the NUMTRK Parameter)	8.91	HR	T55DJ002	0.00 0	34.06 304	0.00 0	0.00 0	34.06 304	34.06
TOTAL Load/Haul Borrow (Backfill)	488.00	LCY		383	437	0	0	820	1.68

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
20. Site Restoration

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20.01. Earthwork	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
-----							
20.01.06. Spreading (Spread/Comp. Borrow)							
Activity:							
Spreading and compacting the stockpiled Non-Contaminated Soil and borrow.							
Output:							
219 LCY per crew hour.							
BLT S1 Heavy Truck Driver (1 ea) - 1 ea	2.23 HR 11792	34.51 77	0.00 0	0.00 0	0.00 0	34.51 77	34.51
FPC S1 Trk,Wtr,Off-Hwy, 6000GAL,Cat621E 6000 GALLON WITH CAT 621E TRAC - 1 ea	2.23 HR T60KI002	0.00 0	60.15 134	0.00 0	0.00 0	60.15 134	60.15
BLT S1 Heavy Equipment Operator (1 ea) - 1 ea	2.23 HR 11788	33.74 75	0.00 0	0.00 0	0.00 0	33.74 75	33.74
GEN S1 DOZER, CRWLR, 251-300 HP (187-224 KW), PS (W/ U BLADE) (1 ea)	2.23 HR T15Z6560	0.00 0	59.43 132	0.00 0	0.00 0	59.43 132	59.43
TOTAL Spreading (Spread/Comp. Borrow)	488.00 LCY	152	266	0	0	419	0.86
TOTAL Earthwork		535	703	0	0	1,238	

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
20. Site Restoration

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20.04. Revegetation and Planting	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
20.04. Revegetation and Planting									
20.04.01. Mech. Seeding with Fertilizer and Mulch									
Notes:									
1. Seeding is assumed to occur during Sept.-Nov. timeframe. 2. Seed/Mulch/Fertilizer cost is \$330/acre (excluding sales tax).									
Output:									
1. Production Rate = 1 Acre/crew hour									
BLT S1 Operating Engineers (2 ea)	0.81	HR	11788	33.74 27	0.00 0	0.00 0	0.00 0	33.74 27	33.74
USR S1 4 Wheel Drive Tractor (Farm) (2 ea)	0.81	HR	YA2	0.00 0	7.50 6	0.00 0	0.00 0	7.50 6	7.50
USR S1 Mulch Spreader (1 ea)	0.41	HR	YA3	0.00 0	1.83 1	0.00 0	0.00 0	1.83 1	1.83
USR S1 Tiller (1 ea)	0.41	HR	YA4	0.00 0	1.25 1	0.00 0	0.00 0	1.25 1	1.25
USR S1 Primary Seeder (1 ea) (Combines Seed Drill and Crimper)	0.41	HR	YA5	0.00 0	1.32 1	0.00 0	0.00 0	1.32 1	1.32
M USR S1 Seed, Fertilizer and Mulch	0.41	ACR		0.00 0	0.00 0	356.40 145	0.00 0	356.40 145	356.40
TOTAL Mech. Seeding with Fertilizer	0.41	ACR		27	8	145	0	180	443.29

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20. Site Restoration

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20.04. Revegetation and Planting	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
-----							
20.04.04. Shrubs/Trees/Groundcover							
Note: Tubling planning of sage brush seedlings @ \$0.80/each. 1. Planting density is 400/acre 2. Planting is assumed to occur during Sept-Nov. timeframe 3. Productivity = 60 seedlings/crewmember/hour 4. Output = 1 acre per crew hour 5. Tubling cost = \$320/acre (excluding sales tax)							
BLT S1 Laborers (6 ea)	2.44 HR 11786	29.73 73	0.00 0	0.00 0	0.00 0	29.73 73	29.73
L BLT S1 Grade 23 Supervision (1 EA)	0.41 HR 11786	29.73 12	0.00 0	0.00 0	0.00 0	29.73 12	29.73
UPB S1 Trk,Hwy, 8,800GVW,4X4, 3/4T-Pkup (1 ea)	0.41 HR T50FO004	0.00 0	7.66 3	0.00 0	0.00 0	7.66 3	7.66
UPB S1 Small tools (6 ea)	2.44 HR XMIXX020	0.00 0	1.57 4	0.00 0	0.00 0	1.57 4	1.57
USR S1 Tubling Cost	0.41 ACR	0.00 0	0.00 0	345.60 141	0.00 0	345.60 141	345.60
TOTAL Shrubs/Trees/Groundcover	0.41 ACR	85	7	141	0	232	570.82

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20.04. Revegetation and Planting	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>							
20.04.91. Irrigation							
The following assumptions is used to calculate an allowance for irrigation costs. Actual site location, conditions and available water sources will determine the most cost effective application of water.							
Parameters supplied by Ecology (January 28, 2000): Irrigate site 4 times in late Spring/early Summer (over a 2 month timeframe). Total application per site: 1.5 inch of water/acre or 40,731 gal of water/acre.							
Crew Output: 0.061 acre per hour, based on 1.6 hrs cycle time per truck (assumes water source 5 miles from site).							
BLT S1 Truck Driver - 1 ea	6.67 HR 11792	34.51 230	0.00 0	0.00 0	0.00 0	34.51 230	34.51
MIL S1 Trk,Hwy, 43,000 GVW, 6X4, 3 Axle (1 ea)	6.67 HR T50FO013	0.00 0	22.21 148	0.00 0	0.00 0	22.21 148	22.21
MIL S1 Trlr,Water Tanker,4000Gal (1 ea) (ADD TOWING TRUCK)	6.67 HR T45XX029	0.00 0	9.22 61	0.00 0	0.00 0	9.22 61	9.22
USR S1 10,000 gal holding tank w/gas powered pump (1 ea)	2.00 MO	0.00 0	300.00 600	0.00 0	0.00 0	300.00 600	300.00
USR S1 2" Dist. lines w/ Sprinkler Hds.	0.41 ACR	0.00 0	0.00 0	0.00 0	2000.00 814	2000.00 814	2000.00
TOTAL Irrigation	0.41 ACR	230	810	0	814	1,854	4555.19
TOTAL Revegetation and Planting		342	825	286	814	2,267	
TOTAL Site Restoration		877	1,528	286	814	3,505	

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
21. Demobilization

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21.01. Removal of Temporary Facilities	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
21. Demobilization									
Note: Because multiple sites will be cleaned up within an operable unit and a cost for mobilization between sites is already included, no allowance for demobilization is made. Only the the following costs for removal of are included here:									
1. Removal of fencing 2. Removal of decontamination area 3. Scarify new roads 4. Misc. Cleanup allowance 5. Post construction submittals 6. Final Topo									
21.01. Removal of Temporary Facilities									
21.01. 5. Remove Decontamination Area									
Note: The duration of this activity is assumed to be 2/3 of the Decontamination Area erection time. Erection time was 24 hrs. Therefore removal time is 24 $x .67 = 16$ hrs.									
BLT S1 Laborers (3 ea)	48.00	HR	11786	29.73 1,427	0.00 0	0.00 0	0.00 0	29.73 1,427	29.73
UPB S1 Small Tools (3 ea)	48.00	HR	XMIIXX020	0.00 0	1.57 75	0.00 0	0.00 0	1.57 75	1.57
GEN S1 LOADER/BH, WH, 0.80 CY (0.6 M3), F/E BKT 30" (762 MM) DIPPER (1 ea)	16.00	HR	L50Z4640	0.00 0	12.72 204	0.00 0	0.00 0	12.72 204	12.72
BLT S1 Operating Engineers (1 ea)	16.00	HR	11788	33.74 540	0.00 0	0.00 0	0.00 0	33.74 540	33.74
MIL S1 Trk,Off-Hwy,R-Dump, 15-19CY, 25T (1 ea)	16.00	HR	T55DJ002	0.00 0	34.06 545	0.00 0	0.00 0	34.06 545	34.06
BLT S1 Truck Driver (1 ea)	16.00	HR	11792	34.51 552	0.00 0	0.00 0	0.00 0	34.51 552	34.51
TOTAL Remove Decontamination Area	16.00	HRS		2,519	824	0	0	3,343	208.93

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21. Demobilization

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21.01. Removal of Temporary Facilities	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
21.01.11. Barricades (Remove Temp. Fence)									
Notes:									
1. It was assumed that the fence could be removed twice as fast installing it. Installation rate was 100 LF/Hr, therefore the dismantling rate is 200 LF/Hr.									
2. It was assumed that the removal crew is 2 laborers. Installation and removal require a flatbed truck with a driver (teamster)									
BLT S1 Laborers (2 ea)	5.36	HR	11786	29.73 159	0.00 0	0.00 0	0.00 0	29.73 159	29.73
UPB S1 Small Tools (2 ea)	5.36	HR	XMIXX020	0.00 0	1.57 8	0.00 0	0.00 0	1.57 8	1.57
BLT S1 Truck Drivers (1 ea)	2.68	HR	11792	34.51 92	0.00 0	0.00 0	0.00 0	34.51 92	34.51
GEN S1 TRUCK, 20,000 - 25,000 (9072 - 11 340 KG) GVW 4X2, 2 AXLE (1 ea)	2.68	HR	T50Z7400	0.00 0	14.03 38	0.00 0	0.00 0	14.03 38	14.03
GEN S1 FLATBED, 8' (2.4 M) X 12' (3.7 M) (ADD 20,000 - 25,000 GVW TRK) (1 ea)	2.68	HR	T40Z6960	0.00 0	0.70 2	0.00 0	0.00 0	0.70 2	0.70
TOTAL Barricades (Remove Temp. Fence)	536.00	LF		252	48	0	0	300	0.56

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21. Demobilization

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21.01. Removal of Temporary Facilities	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
21.01.25. Roads & Parking (Scarify Roads)									
Notes: Includes an allowance for a 12G grader with a 5 shank ripper/scarifier. Assumed two passes on road. Total job assumed to be 30 minutes.									
BLT S1 Operating Engineers (1 ea)	0.50	HR	11788	33.74 17	0.00 0	0.00 0	0.00 0	33.74 17	33.74
UPB S1 Grader,Motor, Artic, Cat 12-G (1 ea)	0.50	HR	G15CA003	0.00 0	32.02 16	0.00 0	0.00 0	32.02 16	32.02
USR S1 5 Shank Ripper/Scarifyer (1 ea) for 12G Grader (Blue Book)	0.50	HR	YA6	0.00 0	1.18 1	0.00 0	0.00 0	1.18 1	1.18
TOTAL Roads & Parking (Scarify Roads)	0.50	HRS		17	17	0	0	33	66.94

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21. Demobilization

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21.01. Removal of Temporary Facilities	QUANTY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
21.01.91. Misc. Cleanup Allowance									
Notes: Activity includes 2 laborers and a flatbed truck with driver for 8 hours to perform misc. cleanup activities around the site.									
BLT S1 Laborers (2 ea)	16.00	HR	11786	29.73 476	0.00 0	0.00 0	0.00 0	29.73 476	29.73
UPB S1 Small Tools (2 ea)	16.00	HR	XMIXX020	0.00 0	1.57 25	0.00 0	0.00 0	1.57 25	1.57
BLT S1 Truck Drivers (1 ea)	8.00	HR	11792	34.51 276	0.00 0	0.00 0	0.00 0	34.51 276	34.51
GEN S1 TRUCK, 20,000 - 25,000 (9072 - 11 340 KG) GVW 4X2, 2 AXLE (1 ea)	8.00	HR	T50Z7400	0.00 0	14.03 112	0.00 0	0.00 0	14.03 112	14.03
GEN S1 FLATBED, 8' (2.4 M) X 12' (3.7 M) (ADD 20,000 - 25,000 GVW TRK) (1 ea)	8.00	HR	T40Z6960	0.00 0	0.70 6	0.00 0	0.00 0	0.70 6	0.70
TOTAL Misc. Cleanup Allowance	8.00	HRS		752	143	0	0	895	111.85
TOTAL Removal of Temporary Facilities				3,540	1,031	0	0	4,571	

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
21. Demobilization

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21.06. Submittals	QUANTITY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
21.06. Submittals									
21.06.05. Post Construction Submittals									
Note:									
This is an allowance of \$5,000.									
TOTAL Post Construction Submittals				0	0	0	5,000	5,000	

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21. Demobilization

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21.06. Submittals	QUANTITY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<hr/>									
21.06.06. As Built Drawings (Final Topo)									
Note: This is an allowance of \$1,600.									
TOTAL As Built Drawings (Final Topo)				0	0	0	1,600	1,600	
TOTAL Submittals				0	0	0	6,600	6,600	
TOTAL Demobilization				3,540	1,031	0	6,600	11,171	

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
70. Project/Construction Mgmt & Supt

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		QUANTITY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
70. Project/Construction Mgmt & Supt										
ERC AB	ERC Cost/Scheduling Engineer (2.69 hours per days of project duration)	37.66	HR	21000	57.91 2,181	0.00 0	0.00 0	0.00 0	57.91 2,181	57.91
ERC AB	ERC Design Engineer (1.72 hours per day of project duration)	24.08	HR	32000	70.82 1,705	0.00 0	0.00 0	0.00 0	70.82 1,705	70.82
ERC AB	ERC Project Engineer (2.27 hours per day of project duration)	31.78	HR	32000	70.82 2,251	0.00 0	0.00 0	0.00 0	70.82 2,251	70.82
ERC AB	ERC Procurement (1.65 hours per day of project duration)	23.10	HR	41000	52.21 1,206	0.00 0	0.00 0	0.00 0	52.21 1,206	52.21
ERC AB	ERC Project Management (3.34 hours per day of project duration)	46.76	HR	51000	88.17 4,123	0.00 0	0.00 0	0.00 0	88.17 4,123	88.17
ERC AB	ERC Quality Assurance (.54 hours per day of project duration)	7.56	HR	52000	71.63 542	0.00 0	0.00 0	0.00 0	71.63 542	71.63
ERC AB	ERC Field Support (8.52 hours per day of project duration)	119.28	HR	53000	55.36 6,603	0.00 0	0.00 0	0.00 0	55.36 6,603	55.36
ERC AB	ERC Administrative Services (1.41 hours per day of project duration)	19.74	HR	55000	32.04 632	0.00 0	0.00 0	0.00 0	32.04 632	32.04
ERC AB	ERC Rad Con Engineer (.46 hours per day of project duration)	6.44	HR	35000	71.63 461	0.00 0	0.00 0	0.00 0	71.63 461	71.63
ERC AB	ERC Safety Engineer (1.42 hours per day of project duration)	19.88	HR	58000	62.78 1,248	0.00 0	0.00 0	0.00 0	62.78 1,248	62.78
TOTAL Project/Construction Mgmt & Supt					20,952	0	0	0	20,952	

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Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
XXX. Estimate Quantities (CFLG01)

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XXX.XX. Input Quantities			QUANTITY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<b>XXX. Estimate Quantities (CFLG01)</b>											
<b>XXX.XX. Input Quantities</b>											
USR	Non-Contaminated Soil		1819.00	BCF		0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
USR	Contaminated Soil		12000	BCF		0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
USR	Top Excavation Length		59.00	LF		0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
USR	Top Excavation Width		89.00	LF		0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
USR	Bottom Area		4000.00	SF		0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
USR	Hauling Distance for Borrow		2.00	MI		0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
USR	Depth of Excavation		3.00	LF		0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
<b>TOTAL Input Quantities</b>				Y/N		0	0	0	0	0	0

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Eff. Date 02/22/00  
DETAILED ESTIMATE

U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
XXX. Estimate Quantities (CFLG01)

TIME 11:10:47

XXX.YY. Additional Quantities			QUANTITY	UOM	CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
<b>XXX.YY. Additional Quantities</b>											
USR	Non-Contaminated Soil - Reduced		77.48	LCY		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Contaminated Soil		511.00	LCY		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Site Area		17731	SF		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Borrow		488.00	LCY		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Total Project Duration		14.00	DAY		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Total Excavation Duration		1.00	DAY		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Low Level Waste (LLW) Volume		511.00	LCY		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Regular LLW Samples - Mobile Lab		6.00	EA		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Bottom Area Closure Sample Qty.		6.00	EA		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	QC Sample Quantity and Analysis		3.00	EA		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Non-Contaminated Sample Quantity		6.00	EA		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Site Perimeter		536.00	LF		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Spread/Compact Soil Quantity		488.00	LCY		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Total On-Site Samples		12.00	EA		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Total Off-Site Samples		9.00	EA		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0
USR	Waste Tonnage to ERDF		767.00	EA		0.00	0.00	0.00	0.00	0.00	0.00
						0	0	0	0	0	0

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DETAILED ESTIMATE

U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
XXX. Estimate Quantities (CFLG01)

TIME 11:10:47  
DETAIL PAGE 39

XXX.YY. Additional Quantities	QUANTITY UOM CREW ID	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
TOTAL Additional Quantities		0	0	0	0	0	
TOTAL Estimate Quantities (CFLG01)		0	0	0	0	0	
TOTAL HANFORD: ER PROGRAM		34,344	5,131	6,251	44,260	89,987	

Fri 23 Feb 2001  
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U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
\*\* PROJECT DIRECT SUMMARY - FEATURE \*\*

TIME 11:10:47  
SUMMARY PAGE 1

	QUANTITY UOM	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST	UNIT COST
01 Mobilization & Prep Work	3,454	514	4,793	1,896	10,658		
02 Monitoring, Sampling, & Analysis	938	0	32	31,200	32,170		
08 Solids Collection & Containment	4,583	2,058	1,140	3,750	11,531		
20 Site Restoration	877	1,528	286	814	3,505		
21 Demobilization	3,540	1,031	0	6,600	11,171		
70 Project/Construction Mgmt & Supt	20,952	0	0	0	20,952		
TOTAL HANFORD: ER PROGRAM	34,344	5,131	6,251	44,260	89,987		
FIELD OH	3.86 %				3,477		
SUBTOTAL HOME OFC	1.12 %				93,464		
SUBTOTAL PROFIT	2.58 %				94,508		
SUBTOTAL BOND	1.08 %				2,434		
SUBTOTAL B&O TAX	0.21 %				96,942		
TOTAL INCL INDIRECTS DIR DIST	22.38 %				97,985		
SUBTOTAL G & A	3.93 %				201		
TOTAL INCL OWNER COSTS					98,186		
					21,974		
					120,160		
					4,722		
					124,882		

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U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
\*\* CONTRACTOR DIRECT SUMMARY \*\*

TIME 11:10:47  
SUMMARY PAGE 2

	QUANTITY UOM	LABOR	EQUIPMNT	MAT/SUPP	UNITCOST	TOTAL COST
AB No Markup Items	23,981	0	32	31,200	55,213	
S1 Prime Contractor	10,363	5,131	6,219	13,060	34,774	

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U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 11:10:47  
SUMMARY PAGE 3

	TOTAL DIRECT	FIELD OH	HOME OFC	PROFIT	BOND	B&O TAX	TOTAL COST	UNIT COST
AB No Markup Items	55,213	0	0	0	0	0	55,213	
S1 Prime Contractor	34,774	3,477	1,043	2,434	1,043	201	42,973	

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U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
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\*\* LABOR BACKUP \*\*

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BACKUP PAGE 1

SRC LABOR ID	DESCRIPTION	BASE	OVERTM	TXS/INS	FRNG	TRVL	RATE	UOM	UPDATE	DEFAULT	***** TOTAL ***** HOURS
HAM 10T17	RAD CON TECH (THI)	57.98	0.0%	0.0%	0.00	0.00	57.98	HR	02/02/00	0.00	26
BLT 11786	LABORERS (S/C)	29.73	0.0%	0.0%	0.00	0.00	29.73	HR	02/09/00	0.00	171
BLT 11788	OPERATING ENGINEERS (S/C)	33.74	0.0%	0.0%	0.00	0.00	33.74	HR	02/09/00	0.00	46
BLT 11792	TEAMSTERS (S/C)	34.51	0.0%	0.0%	0.00	0.00	34.51	HR	02/09/00	0.00	82
ERC 21000	ERC PLANNING & CONTROLS	57.91	0.0%	0.0%	0.00	0.00	57.91	HR	02/02/00	0.00	38
ERC 31000	ERC ENVIRON SPCLST & LEADS	67.63	0.0%	0.0%	0.00	0.00	67.63	HR	02/04/00	0.00	4
ERC 31751	ERC SAMPLE & DATA MANAGEMENT	43.72	0.0%	0.0%	0.00	0.00	43.72	HR	02/02/00	0.00	2
ERC 32000	ERC DESIGN ENGINEERING AVG	70.82	0.0%	0.0%	0.00	0.00	70.82	HR	02/04/00	0.00	56
ERC 35000	ERC ENVIRONMENTAL COMPLIANCE	71.63	0.0%	0.0%	0.00	0.00	71.63	HR	02/02/00	0.00	6
ERC 41000	ERC PROCUREMENT	52.21	0.0%	0.0%	0.00	0.00	52.21	HR	02/02/00	0.00	23
ERC 51000	ERC PROJECT MANAGEMENT	88.17	0.0%	0.0%	0.00	0.00	88.17	HR	02/02/00	0.00	47
ERC 52000	ERC QA (ENVIR COMPLIANCE 35700)	71.63	0.0%	0.0%	0.00	0.00	71.63	HR	02/02/00	0.00	8
ERC 53000	ERC FIELD SUPPORT AVG	55.36	0.0%	0.0%	0.00	0.00	55.36	HR	02/04/00	0.00	119
ERC 55000	ERC ADMINISTRATIVE SERVICES	32.04	0.0%	0.0%	0.00	0.00	32.04	HR	02/02/00	0.00	20
ERC 58000	ERC SAFTY AND HEALTH AVG	62.78	0.0%	0.0%	0.00	0.00	62.78	HR	02/04/00	0.00	20

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U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)  
\*\* EQUIPMENT BACKUP \*\*

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BACKUP PAGE 2

SRC	ID.NO.	EQUIPMENT DESCRIPTION	DEPR	FCCM	FUEL	FOG	TR WR	TR REP	EQ REP	** TOTAL **	
											HOURS
EP	G15CA003	GRADER,MOTOR, ARTIC, CAT 12-H	10.60	3.47	3.99	1.60	0.47	0.08	11.82	32.02 HR	1
EP	H25HI011	HYD EXCAV, CRWLR, 90,200 LBS,	31.08	7.89	8.99	3.99			36.77	88.72 HR	7
MAP	L40CA006	LDR,FE, WH, 4.50 CY, ARTIC, 966F	19.33	4.80	6.68	3.34	3.76	0.63	21.26	59.79 HR	2
GEN	L50Z4640	LOADER/BCK-HOE,WH, 0.80CY(0.6M3)	3.73	0.94	1.82	0.69	0.72	0.12	4.70	12.72 HR	40
GEN	T15Z6560	DOZER, CRAWLER, 251-300HP	16.21	6.01	10.10	3.36			23.75	59.43 HR	2
GEN	T40Z6960	TRK FLATBED, 8'X 12'(2.4MX 3.7M)	0.34	0.06					0.30	0.70 HR	16
EP	T45XX029	TRLR,WATER TANKER,4000GAL	2.85	0.77	1.91	0.53	0.22	0.04	2.89	9.22 HR	7
MAP	T50FO004	TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1.93	0.35	2.28	0.76	0.34	0.06	1.96	7.66 HR	0
EP	T50FO013	TRK,HWY, 43,000 GVW, 6X4, 3 AXLE	6.18	1.13	6.39	2.13	0.80	0.13	5.44	22.21 HR	7
EP	T50PE002	TRK,HWY, 46,000 GVW, 6X4, 3 AXLE	9.86	1.83	10.65	3.55	1.73	0.29	8.71	36.62 HR	24
GEN	T50Z7400	TRUCK, HWY 25,000 (11,340KG)GVW	3.45	0.71	4.42	1.37	0.70	0.12	3.27	14.03 HR	16
EP	T55DJ002	TRK,OFF-HWY,R-DUMP, 13.7-18CY,	10.13	4.84	4.13	1.65	4.09	0.68	8.52	34.06 HR	26
MAP	T60KI002	TRK,WTR,OF-HY, 6000GAL,W/CAT621E	18.24	4.93	10.02	3.78	3.45	0.57	19.16	60.15 HR	9
EP	W25SD005	WATER BLASTR, COLD WTR, 2500 PSI	0.88	0.09	1.16	0.32			1.42	3.87 HR	8
NON	XMIIXX020	SMALL TOOLS	0.50	0.22	0.16	0.07			0.63	1.57 HR	179
USR	YA1	20 Ton Tilt Trailer	3.28						3.28	HR	24
USR	YA2	4 Wheel Drive Tractor (Farm)	7.50						7.50	HR	1
USR	YA3	Mulch Spreader	1.83						1.83	HR	0
USR	YA4	Tiller	1.25						1.25	HR	0
USR	YA5	Primary Seeder	1.32						1.32	HR	0
USR	YA6	5 Shank Ripper/Scarifyer	1.18						1.18	HR	1

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ERROR REPORT

U.S. Army Corps of Engineers  
PROJECT 300-43: HANFORD: ER PROGRAM - REMEDIATION - 300 AREA ACP  
Crib Fr Drain, Large - Rev. 1 - (CFLG01)

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ERROR PAGE 1

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R2032: 021005	Groundwater	Detail item has zero quantity - no costs reported
R2032: 08019102	Water Dispos	Detail item has zero quantity - no costs reported
R2032: 100302	Laborers (1	Detail item has zero quantity - no costs reported
R2032: 100302	Operating En	Detail item has zero quantity - no costs reported
R2032: 100302	CONC PULVERI	Detail item has zero quantity - no costs reported
R2032: 100302	HYD EXCAV, C	Detail item has zero quantity - no costs reported
R2032: 100302	Small Tools	Detail item has zero quantity - no costs reported
R2032: 100601	Operating En	Detail item has zero quantity - no costs reported
R2032: 100601	HYD EXCAV, C	Detail item has zero quantity - no costs reported
R2032: 1821	ERDF Transpo	Detail item has zero quantity - no costs reported
R2032: 1822	Disposal Fac	Detail item has zero quantity - no costs reported
R2032: 70	ERC Environm	Detail item has zero quantity - no costs reported
R2032: XXXXX	Demolition W	Detail item has zero quantity - no costs reported
R2032: XXXXX	Groundwater	Detail item has zero quantity - no costs reported
R2032: XXXXX	Include ERDF	Detail item has zero quantity - no costs reported

\* \* \* END OF ERROR REPORT \* \* \*

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